

SECTION 26 0513

MEDIUM VOLTAGE CABLES

LANL MASTER SPECIFICATION

When editing to suit project, author shall add job-specific requirements and delete only those portions that in no way apply to the activity (e.g., a component that does not apply). To seek a variance from applicable requirements, contact the ESM Electrical POC.

When assembling a specification package, include applicable specifications from all Divisions, especially Division 1, General Requirements.

Delete information within "stars" during editing.

Specification developed for ML-3 projects. For ML-1 / ML-2, additional requirements and QA reviews are required.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Furnish and install rough-in for Medium Voltage Power Cable including the following:
 - 1. Underground Ductbank System
 - 2. Transformer Pad
 - 3. Medium Voltage Switch Pad
 - 4. Medium Voltage Manholes

1.2 LANL PERFORMED WORK

- A. LANL Support Services Subcontractor will furnish, install, terminate, and test the medium-voltage cables.

1.3 SUBMITTALS

- A. Construction submittals: None

1.4 QUALITY ASSURANCE

- A. Comply with the requirements of the National Electrical Code and IEEE C2 National Electrical Safety Code.

1.5 SEQUENCING AND SCHEDULING

- A. Coordinate the installation of the medium voltage cable with the LANL Support Services Subcontractor.
- B. Schedule an inspection of the ducts and ductbank before concrete is placed.

- C. Schedule an inspection of the transformer pad and manholes before concrete is placed.

PART 2 PRODUCTS

2.1 MEDIUM VOLTAGE POWER CABLE (GFE)

- A. The LANL Support Services Subcontractor will furnish, install and terminate 15 kV power cable that is manufactured and tested according to the following requirements.
 - 1. Cable shall be manufactured and tested in accordance with the requirements of NEMA WC74 and ICEA S-93-639, and carry a UL listing as type MV-105 cable (UL-1072).
 - 2. Conductor screen, insulation and insulation screen shall be manufactured by means of the triple-tandem extrusion process.
 - 3. CONDUCTOR SIZE MCM
 - 1/0
 - 4/0

2.9 PAD-MOUNTED TRANSFORMER

- A. Refer to Section 33 7311 Pad-Mounted Transformer Rough-in

2.10 MEDIUM VOLTAGE SWITCH

- A. Refer to Section 33 7711 Pad-Mounted Switch Rough-in

2.11 CONCRETE FORMWORK

Edit the following article to match specification sections used in Division 3.

- A. Refer to Section 03 3001, Reinforced Concrete.

2.12 UNDERGROUND DUCTBANKS AND MANHOLES

- A. Refer to Section 33 7719, Electrical Underground Ducts and Manholes.

2.13 GROUNDING

- A. Refer to Section 26 0526, Grounding and Bonding for Electrical Systems.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces and conditions, with installer present, for compliance with installation tolerances and other conditions affecting medium voltage cable installation. Do not proceed with installation until unsatisfactory conditions have been corrected.
- B. Verify that conduit and duct are ready to receive cable. Use swab and mandrel to clean and test conduits and ducts before the pulling of the cables.

3.2 FIELD QUALITY CONTROL

- A. After conduits are installed, but before concrete is placed, notify the LANL construction Inspector who will notify the LANL Support Services Subcontractor.
- B. Allow 7 working days in schedule for inspection by the LANL Support Services Subcontractor.
- C. Correct deficiencies noted before placing concrete.

3.3 MEDIUM VOLTAGE CABLE INSTALLATION

- A. The LANL Support Services Subcontractor will furnish, install, test, and terminate the medium-voltage cables.

END OF SECTION

Do not delete the following reference information.

FOR LANL USE ONLY

This project specification is based on LANL Master Specification 26 0513 Rev. 0, January 6, 2006.